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|  |                   |                    |
|--|-------------------|--------------------|
| Application No.<br>04 004 401.8 - 2209 | Ref.<br>54 594 VI | Date<br>12.06.2006 |
| Applicant<br>Ricoh Company, Ltd.       |                   |                    |

**Communication pursuant to Article 96(2) EPC**

The examination of the above-identified application has revealed that it does not meet the requirements of the European Patent Convention for the reasons enclosed herewith. If the deficiencies indicated are not rectified the application may be refused pursuant to Article 97(1) EPC.

You are invited to file your observations and insofar as the deficiencies are such as to be rectifiable, to correct the indicated deficiencies within a period

**of 4 months**

from the notification of this communication, this period being computed in accordance with Rules 78(2) and 83(2) and (4) EPC.

One set of amendments to the description, claims and drawings is to be filed within the said period on separate sheets (Rule 36(1) EPC).

**Failure to comply with this invitation in due time will result in the application being deemed to be withdrawn (Article 96(3) EPC).**



Borowski, M  
Primary Examiner  
for the Examining Division

Enclosure(s): 3 page/s reasons (Form 2906)

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Date 12.06.2006  
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Sheet 1  
FeuilleAnmelde-Nr.:  
Application No.: 04 004 401.8  
Demande n°:

The examination is being carried out on the following application documents:

|                     |         |                     |
|---------------------|---------|---------------------|
| Description, pages: | 1-51    | as originally filed |
| Claims, No.:        | 1-16    | as originally filed |
| Drawings, sheets:   | 1/5-5/5 | as originally filed |

### I. Cited Documents

The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

|     |               |                       |     |                  |                       |
|-----|---------------|-----------------------|-----|------------------|-----------------------|
| D1: | US 5 842 081  | 24/11/04 (24/11/1998) | D2: | EP 1 229 399     | 24/11/04 (07/08/2002) |
| D3: | JP 10 239 951 | 11/09/1998            | D4: | EP 0 978 768     | 24/11/04 (09/02/2000) |
| D5: | EP 5 576 393  | 19/11/1996            | D6: | US2002/0 106 574 | 24/11/04 (08/08/2002) |

### II. Lack of Novelty

The present application does not meet the requirements of Article 52(1) EPC, because the subject-matter of **claims 1, 10 and 12** is not new in the sense of Article 54(1) and (2) EPC.

D1 discloses (col.6 l.49 - col.7 l.44, col.18 l.66 - col.22 l.11; fig.1, 36; tab.2-5; the references in parentheses applying to this document):

A charging device (7bd and 6ad) comprising

a charging roller 7bd (see col.6 l.62 - col.7 l.44 for details of such a roller) and a cleaner 6ad in contact with said charging roller, comprising a roller having a shaft and hair located on the roller with a fiber width, length and density in agreement with claim 1 of the application (col.21 l.23 - col.22 l.18, tab.3-5),

wherein voltage is applied to the cleaning roller (col.20 l.22-25). The voltage applying means and power supply is considered as a "member configured to impart substantially a same potential" as that of the charging roller.

Although it is questionable if a voltages that differ by 200 V (col.20 l.22-25) can be still considered as "substantially" the same in the given context, the voltage applying means and power supply of D1 are clearly adapted to change the voltage applied and therefore "configured to impart" such a potential.

D1 also discloses an image forming apparatus (col.6 l.49 - 61, fig.1).

The subject-matter of claims 1, 10 and 12 is therefore not new (Article 54(1) and (2) EPC).

### III. Lack of Inventive Step

The present application does not meet the requirements of Article 52(1) EPC, because the subject-

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matter of **claim 11** does not involve an inventive step in the sense of Article 56 EPC.

The skilled person would regard it as a normal design option to integrate an image bearing member and a cleaning roller of D1 into a process cartridge such as known from D2 Fig.1.

#### IV. Dependent Claims

Dependent claims 2-4, 6-9, and 13-16 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the EPC with respect to novelty and/or inventive step, the reasons being as follows:

- Claim 2: not new: D1, col.19 l.13-15: conductive fibers. Given value for electric resistance is typical for a conductor.
- Claim 3: not inventive: D1, col.19 l.15-17 discloses polypropylene fibers, the use of Nylon fibers does not involve an inventive step. In addition, Nylon fibers are known from D2, [0030].
- Claim 4: not inventive: D1 in combination with D2 [0029] or D3, abstract and fig.2-5
- Claim 6: not inventive: D1 in combination with D2 [0022].
- Claim 7: not new: D1 discloses a speed mismatch, tab.2.
- Claim 8: not inventive: D1 in combination with D4, [0059]-[0060] fig.5, 6: an oscillating member in contact with a charging member is known to avoid problems with contaminations on the charging member.
- Claim 9: not inventive: a one-way clutch is a standard design possibility in order to drive a roller in only one direction.
- Claim 13: not inventive: Standard property of a toner to be used with an apparatus of claim 12, see D5, abstract.
- Claim 14: not inventive: Standard property of a toner to be used with an apparatus of claim 12, see D4 [0057].
- Claim 16: not inventive: Standard property of a toner to be used with an apparatus of claim 12, see D6, abstract.

#### V. Lack of Clarity

The following terms are unclear and should be amended with respect to Article 84 EPC.

1. The term "*hair*" used in **claim 1** is vague and unclear. Terms like "fur brush", "bristle" are commonly used in the technical field of cleaning members and charging rollers.
2. "*lines/cm<sup>2</sup>*" used in **claim 1** is unclear and should be amended according to desc. p.15 l.8 ("*fibers/cm<sup>2</sup>*").
3. **Claim 7** is an alternative with respect to claim 6 according to desc. p.6 l.5, therefore dependent

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- on claims 1-5. Similar, **claim 9** is dependent on claims 1-7 according to desc. p.18 l.21 ff.
4. Although it appears allowable to further characterize an image forming apparatus by the physical form of the toner used in such an apparatus, it is not clear, how said apparatus can be further characterized by a method of preparation of the toner, such as detailed in **claim 15**. -  
In particular, a problem of clarity arises from the mixing of categories (toner preparation method and image forming apparatus), which may lead to an objection with respect to lack of unity, if the application wishes to maintain the present form of the claims.
5. It is noted that claim 1 contains all the features of claim 10 and is therefore depending on claim 10 with respect to Rule 29(4) EPC. Nevertheless, the present claim structure appears to be allowable and more consistent.

#### VI. Further Remarks

The applicant is requested to file new claims which take account of the above and below comments.

It appears that the additional features of dependent **claim 5** are not disclosed in their present form in any of the documents cited in the search report. It is suggested therefore that a new independent claim be drafted to include these features, bearing in mind that the features known in combination in D1 should be placed in the preamble of such a claim in accordance with Rule 29(1) EPC and the remaining features being included in the characterising part (Rule 29(1)(b) EPC).

To meet the requirements of Rule 27(1)(b) EPC, the document D1 should be identified in the description and the relevant background art disclosed therein should be briefly discussed.